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I.

AN ADDRESS FROM A SPECIAL COMMITTEE OF THE
COLLEGE OF PHYSICIANS OF PHILADELPHIA
TO THE MEDICAL SOCIETIES OF THE
UNITED STATES:

CONCERNING THE DANGERS TO WHICH THE COUNTRY IS EXPOSED BY
THE INEFFECTUAL METHODS OF QUARANTINE AT ITS PORTS,
AND IN REGARD TO THE NECESSITY OF NATIONAL
CONTROL OF MARITIME QUARANTINE.

II.

REPORT OF THE COMMITTEE

OF THE

COLLEGE OF PHYSICIANS OF PHILADELPHIA

APPOINTED TO INVESTIGATE THE EFFICIENCY OF OUR QUARAN-
TINE ARRANGEMENTS FOR THE EXCLUSION OF CHOLERA
AND OTHER EPIDEMIC DISEASES.

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AND NATURAL SCIENCES**

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TO WHICH IS APPENDED

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OF MARITIME QUARANTINE.

THE undersigned, a Committee appointed at the meeting of the College of Physicians, held October 5, 1887, "to consider the present danger of the importation of cholera into this country, and to secure concerted action among the medical societies of the United States in urging upon the State and National authorities the adoption of a uniform and efficient system of quarantine for all exposed ports," has the honor of submitting herewith to your Society its report of October 28, 1887, in regard to the quarantine arrangements at the ports of New York, Philadelphia, and Baltimore.

The Committee points to the condition of affairs therein described as the outcome of the system of independent municipal and State quarantine which prevails at the ports of the United States, and asks your consideration of a brief criticism of the system, and your aid in an organized effort to establish a more satisfactory order of things by placing the management of maritime quarantine in the hands of the General Government.

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In this country active consideration by legislators of the dangers which threaten the general welfare by the invasion of epidemic diseases through our foreign communications has in the past been fitful in the extreme. From 1698 down to the present moment, it has been only when, goaded by the spur of imminent danger or lashed into activity by the fresh memories of disastrous visitations, the people have with a great unanimity urgently and loudly demanded it, that spasmodic efforts to protect the general health have found a reflex in the statute laws. Whilst our statesmen and law-makers have with more or less wisdom and constancy, by the enactment of National and local laws, guarded the personal liberties and material interests of the citizen, have established more or less adequate regulations for internal trade and foreign commerce, and have performed the public duty of providing a defence against a common enemy, yet thus far they have, with singular neglect, of their own motion failed to make any attempt to provide against the ever-present danger to the general welfare from the ravages of those epidemic diseases which are brought to our shores. It is, however, true that the government has in recent years attempted to prevent the importation of diseases to which cattle are subject, by the appointment of inspectors to act in harmony with the officials of such States as have established a quarantine against diseased animals. The health laws under which we at present live are, as a rule, such only as emergencies have called into existence. Though many of their provisions may have endured beyond the danger which immediately threatened, they have been framed with an eye single to the present need, and with the expectation that an alarmed public sentiment in the threatened locality would materially supplement their in-

completeness. They have seldom or never been drafted with a full recognition of the need of adequate and constant protection of the health of the general public. Imperfect and temporizing as the local health laws have been, and still are, the spirit which has inspired them has naturally felt the promptings of local interests only, and their inefficient provisions, as a matter of course, have limited their meed of protection to the local interests involved. Moreover, the commercial interests of rival ports, the partisan struggles of opposing political factions, and the heedless parsimony with which money has been doled out for the execution of such health laws as exist, have rendered their vigorous and fearless administration well nigh impossible.

We are aware that there are among distinguished sanitarians, even in this country, those who more than question the power of any quarantine regulations which could be devised, however intelligently and thoroughly enforced, to protect efficiently the general public against invasions of contagious and infectious diseases, and who are inclined to advocate the policy that the State should rather expend her energies and money in removing local conditions which favor the development of epidemics and make their spread possible. But the only country where such a policy has been pursued with some measure of success is England, after a decade of expenditure of thirty millions of dollars per annum within her compact, small territory, located as it is out of the line of movement of the hordes of infecting emigrants constantly leaving all ports of Europe, and outside of the latitudes which favor the existence of yellow fever. After the United States of America shall have intelligently spent at least an equal sum, namely, three hundred millions of dollars, in the

earnest and persistent effort to improve the hygienic surroundings of the homes of a population already nearly twice as great as that of England, and scattered over a territory thirty-four times as extensive, we may then have reached a condition with regard to public health, in which it may possibly be wise to abandon maritime quarantine and to rely mainly upon the protection secured by a perfected local hygiene alone. Meanwhile, under present circumstances, recognizing the enormous cost of radically destroying the conditions which foster the development and prevalence of epidemics by thoroughly removing the filth among which they thrive, and fully appreciating the incalculable benefit which would certainly follow such a wise expenditure of hundreds of millions of the public money, we feel convinced that, with respect to the danger which constantly threatens the public health from abroad, there are at this time only two courses between which to choose, namely: a practical abandonment of the general public to a more or less individual and fruitless struggle with the agents of contagion and infection in whatever localities the movements of immigrants may chance to convey them; or an intelligent, constant, earnest, and vigorous effort to stop and destroy them at the ports of entry. Whilst it is true that to remove the local conditions which favor the development and spread of contagious and infectious diseases is to lessen greatly their harmfulness, it is none the less undeniable that to destroy the infecting agent or contagium, or to prevent its entrance into the country, is by a single act, to prevent the implantation of the seed and to render the harvest impossible, let the soil be never so fertile. Furthermore, the cost of preparing to wage a successful combat against the entrance and spread of disease among hundreds of scattered villages,

towns, and cities is infinitely more than that which would be required to place our ports in a nearly perfect state of defence against those diseases which are now subjected to quarantine; and the loss to the public occasioned by a single widespread epidemic of cholera, yellow fever, or smallpox is far greater than would be the cost of the proper maintenance for many years of a perfect quarantine establishment at all of our ports.

The hundreds of thousands of European immigrants who annually reach our country after starting from or passing through localities which are infected with contagious disease, frequently in their persons or in their pestiferous clothing and effects carry with them, often as far as their ultimate destination, the active germs of these diseases; and the herding of these immigrants into the miserably ventilated and frightfully unsanitary quarters usually provided for the steerage passengers on steamships, the modern rapidity of ocean travel, and the great facility with which these swarms of people are soon distributed all over our country, combine to multiply the danger to the public health with which, under the laxity of our laws and the unsatisfactory administration of them, this incessant influx constantly menaces the country.

In their enormous numbers, their poverty, and their squalor, and in their frequent transportation of all sorts of infections and contagions, these immigrants can be likened only to the oriental pilgrims, in whose track pestilence has so frequently followed. It is, indeed, with the extremest rarity that smallpox or cholera has in modern times been introduced into North America by any travellers other than the immigrant class. To take the proper means to guard the ports of entry against the

infected persons and baggage of cholera immigrants would probably keep cholera from our midst; to do the same with smallpox immigrants, with the addition of compulsory vaccination and disinfection of personal effects, as an invariable condition precedent to the privilege of landing, would go far toward banishing that scourge from the land; and the importation of scarlet fever, diphtheria, and like diseases might be prevented by similar measures.

The weighty objections urged against maritime quarantine as a means of protecting the public health from the assaults of preventible diseases imported by sea, are only two: First, the alleged failure to keep out these diseases by this means; second, the alleged injury to maritime trade.

In our opinion the first objection finds a complete answer and explanation in the grossly imperfect state and the maladministration of the quarantine defences, as shown in the accompanying report; yet it may be truthfully affirmed that the quarantine at the port of New York, in its establishment and administration, is one of the best, in many respects, that will at present be found anywhere in the world. It seems to us, therefore, absurd to argue against the capabilities of a thoroughly equipped maritime quarantine, strictly administered, from the historical failures of those establishments which, with respect to plant, equipment, and direction, have been obviously deficient in the essential requirements of a modern quarantine.

The second objection is always a serious one for a people extensively engaged in maritime trade. But it is met, we think, by a due consideration, in the light of modern knowledge, of the wide and essential difference

between the requirements for the proper treatment, respectively, of the ship's cargo, and of the ship's inhabitants. It is the ship's inhabitants, with their personal effects, who almost invariably introduce the infectious germs into the country; the merchandise rarely or never conveys the contagion. Indeed, so far as cholera, smallpox, and scarlet fever are concerned, it is only cargoes of rags that may be looked upon with suspicion as possibly capable of transporting the germs of disease from Europe to America. With this possible exception it is not only unnecessary, but there is absolutely no excuse in the treatment of ships with these diseases aboard to detain the cargoes in quarantine for a prolonged period. With adequate facilities at hand, the proper disinfection of the ship need not require her detention or that of the cargo longer than twenty-four hours, an impediment to trade too insignificant to be taken into account when the paramount interests of the public health are considered.

With reference to the detention at quarantine of those of the ship's inhabitants who are well, it need be prolonged but little beyond the period of incubation of the particular disease against which the quarantine is directed. This detention the travelling and immigrant classes alone suffer, the commercial interests of the general public being undisturbed thereby. In the great majority of instances, it is among the immigrants only that actual cases of disease exist; and when we consider the advantages which the immigrant is about to receive, the necessary detention is but a small sacrifice for him to make for the benefit of the people among whom he seeks a home.

In view of the foregoing considerations, the committee would bespeak your earnest attention to the following propositions.

A. The present methods of independent quarantine provided and regulated by seaboard states or cities, are essentially defective and insufficient for the exclusion from the United States of the diseases against which quarantine is directed:

The truth embodied in this statement is abundantly established by the report of the committee in regard to the three ports it inspected. It is fully borne out in regard to the other quarantine stations between the St. Lawrence River and the Rio Grande, by the elaborate official report of Dr. John H. Rauch, Secretary of the Illinois State Board of Health, to that body in 1886.

The defects of local quarantine stations arrange themselves in two principal groups: 1. Inadequacy of establishment. 2. Faults of administration.

1. With regard to the establishment—which term is here used to include the accommodations for the temporary housing and care of immigrants and travellers not sick, adequate hospital accommodations for the sick, appliances for disinfection, and the necessary medical, nurse, police, and other attendants for the care of both of these groups of individuals—only four of the many stations upon the Atlantic and Gulf coast may lay claim to anything like adequate provision. These are Grosse Isle quarantine station on the St. Lawrence River below Quebec, the Boston quarantine station on Galop's Island, that in the New York harbor, and those in the Mississippi River below New Orleans.

Of these four, it may be said, first, that the very excellent establishment at Grosse Isle is practically useless

as a safeguard against the importation of disease, in view of the fact stated in the report of Dr. Rauch, that during the quarantine season up to October 9, 1885, only thirty-two vessels out of a total of four hundred and twenty arrivals, had stopped at this station for examination; second, that no mention is made in Dr. Rauch's description of the quarantine station at Boston of any provision for the housing and care of travellers and immigrants not sick; third, that in the last named particular, as well as in several other respects, the quarantine station at New York, hitherto regarded as fully adequate to the requirements of that great port of entry, shows serious defects. According to the official description by Dr. Joseph Holt, President of the State Board of Health of Louisiana, it would appear that the quarantine station at the mouth of the Mississippi is, in respect of establishment, fully up to the requirements of modern science. Of the intervening stations it is scarcely necessary to speak. Certainly, as regards the prevention of cholera, and to a less extent also, of yellow fever, the greater number of them constitute quarantine stations simply in name.

2. When we come to consider faults of administration, it is obvious that it is impossible to discover their nature or extent during times of quarantine inactivity—that is to say, during those fortunately more or less prolonged periods in which the absence of disease upon incoming ships narrows the duties of the quarantine officials down to the simple inspection necessary to establish that fact. We have, therefore, at present no criterion by which to judge of the efficiency of the quarantine administration at the greater number of the stations. The fact already mentioned with reference to the quarantine station at Grosse Isle, that during the quarantine season of 1885,

up to October 9th, only thirty-two vessels out of the total four hundred and twenty were examined, indicates defects in administration at that station so glaring as to require no further comment.

Faults of administration, equally serious although of a different kind, are shown by the accompanying report of the committee to have recently existed at the quarantine station in the lower bay of New York harbor, at a time when cholera actually existed in the hospital and was from day to day finding new victims among more than five hundred Italian immigrants detained at the quarantine of observation on Hoffman Island. It is only necessary to emphasize this statement by calling attention to the following facts brought to light by the investigations of the Committee: first, the absence of resident medical officers, both at the hospital on Swinburne Island and at the quarantine of detention on Hoffman Island; second, the absence of anything like an adequate sanitary police force on the latter island; third, the absence of any effort to separate the well, detained on Hoffman Island, into small groups, and of any proper daily systematic inspection, such as would enable the authorities promptly to discover and isolate new cases of cholera; fourth, the unreasonable detention for a period of nearly two months of more than five hundred immigrants not sick, under circumstances of great hardship, exposure, and deprivation—a fact which, in view of the present state of knowledge in regard to the nature and mode of transmission of the infecting principle of cholera, in itself bears overwhelming testimony to culpable maladministration. And this was the situation after cholera had continued to prevail in countries, the ports of which were in constant, direct communication with New York, for a period of four

years, and after the entire public press of the United States had persistently called attention to the ever-present danger of its reaching our shores. When the state of affairs actually existing at the New York quarantine during the presence of cholera there in the autumn of 1887 is compared with the impressions of Dr. John H. Rauch concerning the completeness of the quarantine at that port in 1885, as expressed in his own words, the difficulty of justly estimating the real efficiency of any statement by inspections made during seasons of comparative quarantine inactivity becomes apparent. Dr. Rauch thus sums up: "With reference to the exclusion of cholera and smallpox, the quarantine plant and facilities of the port of New York are unrivalled, the printed regulations judicious, and with proper vigilance the service should suffice to prevent either of these diseases from obtaining access to the country through this avenue."

B. It is impossible adequately to protect the public health of the country against the importation of epidemic diseases by independent local maritime quarantine establishments:

1. The history of epidemic diseases in this country serves to establish the truth of this proposition. Every epidemic of cholera, typhus or yellow fever, and several important epidemics of smallpox have been directly imported despite existing quarantine regulations.

2. There is always great difficulty in obtaining sufficient appropriations of public money to defray the expenses of the necessary quarantine establishments and their proper maintenance. It is only possible, during periods of threatened invasion, to procure the considerable sums of money necessary for these purposes, whilst

in the interim the money expended is greatly inadequate, though large amounts are constantly needed. When the invader is at our gates it is often impossible to plan, construct or repair, and properly equip and garrison an efficient line of defences.

3. Rival political and commercial interests are inimical to the perfect protection of the general public by independent and local quarantine.

The port of New York, through which three-fourths of the imports and immigrants enter the country, is in the following peculiar situation with respect to the relations of local health boards: By the health laws of the State and of the municipality of New York, the principal quarantine officer is a member *ex-officio* of the municipal Board of Health of the city of New York and of the State Board of Health, and he is also a member of the Quarantine Commission. Neither the State nor the municipal boards have, therefore, a voice in the direction of quarantine. Each of these three bodies consists of a very limited number of members, and each is also entirely independent of any supervision or control by the others. Not only does this anomalous independence exist in accordance with the provisions of law, but there is undoubted evidence of an indisposition of the city Board of Health to inquire in any manner into the management of quarantine at the port, not being officially under its care.

In a letter dated November 4, 1887, replying to an official communication from the Mayor of New York, making inquiries concerning the dangers to which that city was exposed by reason of the existence of cholera at the quarantine station of the port, and the means of preventing its spread to the city, the President of the municipal Board of Health, after detailing the provisions

which had been made for the prompt isolation and treatment of cases of cholera which might develop in the city, explicitly denies official knowledge of the condition of affairs at the quarantine, and further states that he would regard it as unbecoming for him to discuss it; this, notwithstanding the fact that the quarantine officer is a member of that same Board.

4. The last statement illustrates one of the more serious dangers to which the general public is exposed through local maritime quarantine organizations; namely, the possibility of bodies of immigrants with infected baggage being transferred directly from the quarantine station to distant inland communities by rapid railroad journeys, without any prolonged sojourn, or without any adequate inspection or precautions being taken by the authorities of the seaboard cities through which they pass. In point of fact this danger was realized in regard to cholera in 1873, when epidemic outbreaks of that disease occurred in Ohio, Minnesota, and Dakota, which were "caused by cholera poison packed up, in the household effects of emigrants, in Holland, Sweden, and Russia, respectively. These emigrants sailed from healthy ports, in healthy vessels and were subjected to the usual sanitary requirements of the period. They passed through New York and the intermediate territory without injury to the public health; but when their infected goods were unpacked in the interior of the continent, they liberated the poison which gave rise to the local outbreaks." [Report of Dr. Rauch.]

5. It is but natural that municipal organizations should, in looking after their own interests, pay little regard to the welfare of distant communities.

In this connection may be noted the indisposition and failure on the part of local quarantine officers to notify the authorities interested of the arrival of emigrants from infected localities. Notwithstanding the frequent paramount interest of inland communities in the efficiency of the establishment and administration of quarantine at the seaboard, the local authorities of the latter frequently evince an unreasonable jealousy of any sort of investigation or suggestion looking to the general welfare.

6. In the absence of any general regulation or supervision, local quarantine measures must, in the nature of things, be exercised with varying degrees of efficiency; the most complete establishment and perfect administration at a few ports might, therefore, fail to protect the country if defective or inadequate measures of quarantine were practised elsewhere.

C. A national system of maritime quarantine is necessary :

1. It is only by this means that the necessary protection against the importation of epidemic diseases in all our ports can be continuously secured.

2. It is the only practical means by which uniformity of establishment and administration, regard being had to the modifications made necessary by difference of latitude and other circumstances, can be assured. Such necessary uniformity can be obtained by no other arrangement, for the reason that the National Government is alone able to defray the expense of complete quarantine establishments at every port, according to the requirement of each and without regard to the revenue derived from the shipping of any.

3. The benefits of quarantine inure to the welfare of

the whole country ; therefore, it is just that money should be as freely expended when necessary at one port as at another, without respect to their relative commercial importance. It is manifestly unfair that the seaboard cities and States should, as at present, be obliged to bear the entire expense of quarantine establishments designed to protect the inhabitants of every region of the vast territory of the United States.

4. A national quarantine, properly administered and conducted by trained officials accustomed to deal with contagious and infectious diseases, would tend to prevent panic, to allay undue anxiety, and to favor a reasonable sense of security.

5. Experience has shown that much needless alarm, as well as preventable danger, arises upon the appearance of an unfamiliar epidemic disease at quarantine stations ; as when cholera has shown itself at New Orleans or New York, or yellow fever at Philadelphia or Boston. A national quarantine would go far to do away with the necessity for vexatious temporary interstate quarantines which so seriously disturb inland trade.

6. A national quarantine system, directed in such a manner as fully to meet the requirements of existing sanitary knowledge, would not adversely disturb any commercial interest. It would, on the contrary, do away with many of the embarrassments incident to maladministration of existing local regulations. For example, the healthy passengers of the Italian steamship "Alesia" were detained at quarantine in New York harbor for a period of fifty-eight days, while under an efficient system uninfluenced by needless fears, those of them who were free from disease could have been safely liberated in ten days at furthest.

7. A national quarantine would not necessarily supersede any existing arrangements regarded as expedient by local authorities. It should be conducted wholly without cost to shipping, and would thus work no additional pecuniary hardship, even if the present fees were to be still exacted by the local authorities.

8. The ability of the National Government, by an existing act of Congress, to come to the aid of local quarantine authorities in answer to the appeal of the Executive of any State in time of grave danger, implies a function of very narrow scope and uncertain application. Appeals of this kind are apt to be deferred until the emergency is extreme, and the aid obtained from the Government is, therefore, likely to be rendered too late to accomplish its most important purpose, namely, the prevention of an invasion.

D. A national organization would secure advantages not attainable by independent local quarantine establishments however complete :

1. Suitably arranged and commodious buildings, provided with necessary furniture and appliances at all ports.

2. An efficient corps of trained officials and assistants always on duty.

3. The practicability of the concentration of force, money and attention at any threatened port without loss of time.

4. Officials under control of the National Government, and free from local political and commercial influences.

5. The objects of quarantine would be furthered by full and reliable consular reports and sanitary inspection of emigrants at ports of embarkation, functions properly belonging to officials of the General Government.

The organization of a national maritime quarantine system in the United States should require :

1. That the whole matter be placed under an appropriate department of the General Government.

2. A central bureau of control established at Washington.

3. A sufficient corps of medical officers and assistants, with nurses, sanitary police, laundrymen, engineers, and officers and crews for boarding tugs, organized at every station. Among the requirements for the medical service should be a speaking knowledge of at least two modern languages besides English. The establishment of a school and laboratories for sanitary instruction and research in connection with this service would be an advantage. In addition to the men on duty at the respective stations, there should be a sufficient number of medical and other officials fully trained in quarantine duties and familiar with contagious diseases, unattached and available for immediate auxiliary service at any threatened port.

4. The erection of necessary hospital, and other buildings, wharves, disinfecting apparatus, wash-houses, latrines, etc., in suitable localities, when possible upon islands at or near the entrances to harbors, and at some distance from the main channel.

5. These stations must be organized and fully equipped at every port of entry of the coast, in such a way as to meet the requirements of each port in the measure of its commerce and immigration, and the especial diseases to which it is most exposed.

6. The cost of the establishment and maintenance of the national maritime quarantine should be provided for

by appropriation from the national treasury, and not from fees exacted from vessels.

SUMMARY.—Under the present system of local and independent maritime quarantine, the necessary quarters for the detention of large numbers of immigrants arriving in a suspected vessel, are either entirely wanting, or, if at hand, are deficient in equipment or administration or both. It is possible, however, that one port well governed and rich from prosperous commerce, may make up these deficiencies; yet what would this avail even to that community itself, if a neighboring port, only a few hours distant by rail, failed to exclude epidemic diseases. The front door might be doubly barred and bolted, but the enemy would find an easy passage through the defenceless rear. As recent examples thereof may be instanced the danger of an epidemic of yellow fever to which the little town of Biloxi, in Mississippi, exposed in 1886 not only the interior States but even the city of New Orleans itself, now apparently so well protected by her own system of maritime quarantine; and that to which, in 1887, the defenceless condition of the small port of Tampa, in Florida, exposed not only that State but others.

This want of uniformity in the quarantine defences along our coast must necessarily exist when different authorities supply the money for maintaining the several stations and the purse of one port is longer than that of its neighbor. Another money difficulty is found when the appropriation for the same station comes, as it may, from the coffers of both city and State; possible difference of opinion in the municipal council and the State legislature is likely to endanger the sufficiency or change the

direction of the funds to be expended. In any case, the danger to a single port of entry, or even to a single State, is by no means the same as that which threatens the country at large, and communities are not likely to make a larger expenditure than is needed for their own defence. As an illustration of a difference in the conditions of danger which may exist between a port of entry and the interior of the country, may be mentioned the passage of immigrants with infected baggage. The immigrants may come from a healthy port and in a healthy ship, and with the poison securely imprisoned in their baggage, will pass through the port of entry with perfect safety to its inhabitants; the danger will begin in that far interior where the baggage is opened. It is of no interest to that port to have the baggage disinfected, and it is carried on to some uncertain place unhindered to do its fatal work. And here may be pointed out the rather peculiar position in which America finds itself, in attracting to its shores hordes of immigrants from the older countries. There is in municipalities little disposition to spend more even than is called for to satisfy immediate wants; remote necessities are seldom provided for. A quarantine that is not always in use, is not always ready for use. It is only when danger is at its gates, and when, perhaps, it is too late for protection, that a city wakes up to its defenceless state. Municipalities are selfish, and knowing that with the trader quarantine is not a favorite institution, and that it is his tendency to sail into that port where the quarantine is most lax, they are assailed with a sore temptation to wink at the neglect of proper precautions, if, by so doing, they may circumvent a possible commercial rival.

In the opinion of the Committee, the difficulties men-

tioned can only be overcome by the adoption of a maritime quarantine under the control of the National Government.

The danger from immigrants would not be entirely banished, however, though the quarantine of the coast of the United States were perfect; for the way through the British provinces would still be open to these travellers. In the absence of efficient quarantine inspection in the St. Lawrence River, the attempt thoroughly to protect ourselves from importations of epidemics, would necessitate the doubtful and difficult expedient of a land quarantine. The more efficient plan would be to have the same precautions taken at the ports in the British provinces as should be practised at those in the United States, but this course could only be assured through treaty, which our local authorities are not competent to make.

It appears that our Canadian neighbors have already evinced their desire for uniform quarantine laws for the two governments. The Provincial Board of Health of Montreal, recognizing a community of interest in the question of maritime quarantine, have deemed the presence of the Canadian Fish Commissioners in Washington opportune for the adoption of resolutions requesting them to urge upon the American authorities "the necessity of establishing uniform quarantine regulations for both countries." In connection with an efficient system of national quarantine, a harmony in the provisions of law in the United States and in Canada seems indispensable for the full protection of our extensive northern frontier, and our National Government should be strongly urged to respond actively to the expressed wishes of the Canadian authorities relating to such an important matter of common interest.

In conclusion, the College of Physicians of Philadelphia, through its Committee, earnestly asks your prompt consideration of the matters herein set forth, and your active coöperation in an organized effort to obtain this winter such national legislation as will efficiently and with reasonable security protect the public health, not only from the danger of the importation of cholera and yellow fever during the time that they are epidemic in countries with which the ports of the United States are in communication, but also from the almost incessant conveyance into the interior of the contagion of scarlet fever and smallpox by emigrants. The disappearance of cholera from the quarantine station at New York, without the development of the disease anywhere in the country, should be regarded as a fortunate occurrence, but at the same time a serious warning. This country has never yet escaped an epidemic of cholera when it has visited Europe. Sooner or later, the disease has invariably been introduced and has spread more or less widely throughout our land. We should, therefore, profit by the cold season, during which we are comparatively safe from the ravages of two of the most dreaded of our imported epidemic diseases, to prepare against a possible, and, as many believe, even a very probable, advent of cholera with the return of warm weather. We should use the present opportunity to arouse public sentiment and our national legislators to the necessity of wise, deliberate, far-reaching, and prompt action in behalf of the general welfare, by the establishment all along our coast of a thoroughly equipped and efficiently directed maritime quarantine.

In the case that your Society determine to coöperate in securing the ends in view, we would respectfully sug-

gest that you at once notify the committee of the fact, and, without delay, authorize a member of your body (whose name and post-office address should accompany the notification) to confer with the Committee either by correspondence or in person, for the purpose of deciding upon the details of a bill to be introduced in Congress early in the present session.

If your coöperation be agreed upon, we would further suggest that, as a body and as individuals, you assist in influencing legislation by the following means:

1. The passage of formal resolutions recognizing the necessity of National control of maritime quarantine, and urgently recommending the matter upon the consideration of your representatives in Congress.

2. Strenuous efforts to enlist popular sentiment in support of such legislation.

3. The enlistment of the influence of the local medical and public press.

Finally, in view of the necessity of inaugurating, at the earliest moment possible, the effort to secure the proposed legislation, we would earnestly request prompt action on the part of your Society and early notification thereof.

J. C. WILSON, *Chairman*.

E. O. SHAKESPEARE,

R. A. CLEEMANN.

PHILADELPHIA, Dec. 14, 1887.

Address:

DR. J. C. WILSON, *Chairman*,

College of Physicians, Philadelphia.

REPORT OF THE COMMITTEE OF THE
COLLEGE OF PHYSICIANS OF PHILADELPHIA

APPOINTED TO INVESTIGATE THE EFFICIENCY OF OUR
QUARANTINE ARRANGEMENTS FOR THE EXCLUSION
OF CHOLERA AND OTHER EPIDEMIC DISEASES.

TO THE PRESIDENT AND FELLOWS OF THE COLLEGE:

Your Committee appointed at the meeting of the College held October 5, 1887, to consider the present danger of the importation of cholera into this country, and to secure concerted action among the medical societies of the land in urging upon the State and National authorities the adoption of a uniform and efficient system of quarantine for all exposed ports, respectfully reports as follows:

The acceptance of the germ theory of infectious and contagious diseases, or the probability at least of its truth, places in a new light the management of quarantine for detention and disinfection of vessels and their passengers. Anterior to the promulgation of this doctrine the etiology of these diseases was so obscure, that it is not a matter of surprise that such diverse views existed on the subject of quarantine; as shown by its absolute abandonment in Great Britain, for instance, and, on the other hand, by its enforcement with unreasonable severity in the southern ports of Europe. There was no clear idea of that which was to be guarded against, and, therefore, no measures

generally and unreservedly accepted as a means to the desired end.

In view of the nature of the work with which your Committee was charged, we found ourselves confronted with two questions of urgent importance:

I. What are the requirements of an efficient maritime quarantine against cholera?

II. To what extent do the existing arrangements at the ports of New York, Philadelphia, and Baltimore fulfil these requirements? [We speak of these ports only, because circumstances did not permit more extended personal investigations, and there is no reason to believe, from the published official descriptions, that the conditions of the other ports of entry upon our Atlantic and Gulf coasts are in any respect superior.]

I. In reply to the first of these questions, we cannot do better than quote at length from the editorial pages of a recent number of *The Medical News*.¹

“Measures of prevention, to give the greatest possible guarantee of success in extinguishing an incipient epidemic of cholera, should, in the first place, be based upon the most exact knowledge we possess of the cause, mode of attack, and manner of spread of the disease; and, in the second place, these measures should be intelligently, thoroughly, and rigidly enforced.

“What are the considerations involved in the first category? Probably nine-tenths of intelligent and experienced physicians all over the world, even including those of India, have for years admitted that there is most convincing proof that the active cause of the disease is a specific, material, living entity, of extremely minute size, endowed with the power of self-propagation, and of exceedingly rapid multiplication in enormous numbers; that among animals it naturally attacks

¹ October 15, 1887, pages 455, 456, 457.

man alone, assailing him only by way of the intestinal canal; that the evacuations from the bowels contain the active cause of the disease, and that when this agent in any manner—as through drinking water, milk, food, or the handling or washing of contaminated personal effects, etc.—reaches the intestines of another susceptible person, the disease may be thereby transmitted from the sick to the healthy; that the active agent exists in the dejecta of the lightest and most imperceptible no less than the severest and most deadly forms of the disease, and is known to be transportable from place to place through the movements of man and his personal effects.

“Proceeding from this basis, logical deduction and common experience alike demonstrate the absolute necessity and efficiency of such measures of prevention as the following :

“*a.* Speedy recognition and isolation of the sick; their proper treatment; absolute and rapid destruction of the infectious agent of the disease, not only in the dejecta and vomit, but also in clothing, bedding, and in or upon whatever else it finds a resting-place.

“*b.* The convalescents should remain isolated from the healthy so long as their stools possibly contain any of the infecting agent; before mingling again with the well they should be immersed in a disinfecting bath, and afterward be clothed from the skin outward with perfectly clean vestments, which cannot possibly contain any of the infectious material.

“*c.* The dead should be well wrapped in cloth thoroughly saturated in a solution of corrosive sublimate, 1 to 500, and without delay, cortege, or lengthy ceremonial, buried near the place of death in a deep grave, remote as possible from water which may, under any circumstances, be used for drinking, washing, culinary, or other domestic purposes. (Cremation, of course, is by far the safest way of disposing of cholera cadavers.)

“*d.* Those handling the sick or the dead should be careful to disinfect their hands and soiled clothing at once, and especially before touching articles of food, drinking or culinary vessels.

“*e.* In the case of maritime quarantine, the well should be disembarked and placed under observation in quarters spacious enough to avoid crowding, and so well appointed and furnished that none will suffer real hardships.

"*f.* Once having reached the station, those under observation should be separated in groups of not more than twelve to twenty-four, and the various groups should, under no pretext, intermingle; the quarters for each group should afford stationary lavatories and water-closets in perfect working condition, adequate to the needs of the individuals constituting the group, and supplied with proper means of disinfection; there should be a bed raised above the floor, proper coverings, and a chair for each member of the group, each person being required to use only his own bed; there should be a common table of sufficient size to seat around it all the members of the group, who should be served their meals from a central kitchen, and with table furniture belonging to the station and cleaned by the common kitchen scullions.

"*g.* Drinking-water, free from possible contamination and of the best quality, should be distributed in the quarters of each group, as it is needed, and in such a manner that it is received in drinking-cups only; there should be no water-buckets or other large vessels in which handkerchiefs, small vestments, children's diapers, etc., can be washed by the members of any group.

"*h.* Immediately after being separated into groups in their respective quarters, every person under observation should be obliged to strip and get into a bath (a disinfecting one is preferable), and afterward be clothed with fresh, clean vestments from the skin outward. Every article of clothing previously worn should be taken away and properly disinfected.

"*i.* Then all of the personal effects should be at once removed to a separate building, washed—if possible—and thoroughly disinfected, or, if necessary, destroyed. After disinfection they should be temporarily returned to the members of groups, when occasion requires a further change of clothing.

"*k.* Under no circumstances whatever should washing of clothing by those under observation be permitted. All used clothing should be first thoroughly disinfected (by boiling, when possible), and then should be cleansed, the disinfection and washing being done by a sufficiently trained and absolutely reliable corps of employés supplied with adequate appliances.

"*l.* All of those under observation should be mustered in their

own quarters and be subjected to a close medical inspection, *while on their feet*, at least twice every day, in order to discover and isolate as soon as possible new cases which may develop; and, of course, the clothing and bedding of these new cases should be treated without delay in the manner already mentioned. In the mean time a watch should be set over the water-closets, for the purpose of discovering cases of diarrhœa, and, when discovered, such cases should be temporarily separated from the rest; they should receive judicious medical attention at once, and precautions should be taken as if they were undoubted, but mild, cases of cholera.

“*m.* The quarters should be kept thoroughly clean, and every surface upon which infectious material could possibly be deposited, including the floors, should be washed with a strong disinfectant twice daily, and oftener when necessary; evacuations from the bowels should be passed into a strong disinfectant; the hopper of the closet should be then flushed, and finally drenched with a quantity of the same disinfectant.

“*n.* For the proper attention to the sick, there should be two or more competent and experienced physicians, assisted by a sufficient corps of intelligent and efficient nurses, with hours of duty so arranged that a physician with a sufficient number of nurses be in constant attendance in the wards of the hospital.

“*o.* For the prompt recognition and separation of new cases, their temporary medical attention, the proper treatment of discovered cases of diarrhœa or cholera, and of other maladies, and the immediate correction of every insanitary practice or condition by constant, vigilant, and intelligent supervision, there should be at least two or more competent and experienced physicians, with hours of service so arranged that a physician is on duty night and day among those under observation; and he should have subject to his orders, at any and every moment, a sufficient and efficient corps of nurses and laborers to carry out properly and promptly his directions.

“*p.* In order to prevent the intermingling of the various groups, to enforce obedience and order, and to make it absolutely impossible for the quarantined and their personal effects to have any communication with the exterior, a well organized and sufficiently large police •

corps should patrol the borders of the stations and the buildings day and night.

"*q.* Any group among whom there has developed no new cases of cholera, or of choleraic diarrhœa, during the preceding eight or ten days, may be regarded as harmless, and allowed to leave quarantine after each one is finally immersed in a disinfecting bath, and re-clothed with clean garments from the skin outward; the garments removed being destroyed, or thoroughly disinfected and cleansed as above indicated.

"As yet, no reference has been made to the crew, ship, and cargo. What has been said of the treatment of those under observation, applies to every one of the ship's inhabitants. The observation, isolation, and cleansing of the crew and their effects, could safely be performed aboard ship if necessary. The ship should be thoroughly cleansed and disinfected, particular attention being given to the quarters of the emigrants and crew."

II. The second question is, To what extent do the existing arrangements at the ports of New York, Philadelphia, and Baltimore fulfil these requirements?

Your Committee began its work by personally inspecting the quarantine stations at New York, Philadelphia, and Baltimore, arrangements having been previously made with the respective officials.

QUARANTINE STATION AT NEW YORK.

The quarantine establishment, visited October 8th, consists of a boarding station, which is the residence of the Health Officer, situated on Staten Island, four miles below the city, just within the Narrows at the entrance of the harbor, and in connection with New York city by telegraph and telephone; of an island of observation known as Hoffman Island, and of another, Swinburne Island, on which latter is erected a large hospital building.

These islands are artificial, being made of foundations of rock, covered with sand; are situated in the lower bay about five miles below the boarding station, and two miles from the shore.

Hoffman Island is probably four acres in area, and rises some eight feet above the level of the sea. There are upon it two large brick buildings of two stories each, and a smaller building, the latter provided with cooking and heating apparatus for the larger buildings. One of the large buildings is furnished with water-closets in each story, and a lavatory in the upper. The rooms of this building are without furniture or bedsteads.

The water supply of this island is as follows: There is a cistern lined with brick, sunken beneath the surface of the sand near each of the large buildings, to collect rain-water from the roof, but at the time of our visit the sunken cisterns contained Croton water brought from the city of New York. The openings of these cisterns are provided with caps. In addition to these, there are two iron tanks of considerable dimensions in the large buildings in which the water-closets are located, and they are elevated some distance above the head. One of these tanks is intended for fresh water, to be used for bathing; the other for salt water to be used exclusively for flushing the water-closets. We found that owing to imperfection in the apparatus, several of the water-closets could not be flushed. The iron soil pipes into which these closets empty lead into the sea, each pipe having, as we were informed, a number of right angles in its course. In the corner of one of the rooms containing the water-closets there was a barrel nearly full of a solution of corrosive sublimate, one part to five hundred. This was employed for the purpose of drenching the pans of the closets *after*

they had been used and flushed. We found the seats and the floors of these water-closets extremely wet.

The lavatory was a small room opposite the water-closets of the second story, containing two metallic bath-tubs, and a few stationary washstands, supplied with fresh water from the above-mentioned tank. We were informed that the bath-tubs had not been used during the present emergency. Immediately opposite the water-closets on the lower floor, and beneath the lavatory, was a small room devoted to the uses of a temporary hospital. This room contained four bedsteads with the corresponding bedding, but no other furniture, and was occupied by three recently developed cases of cholera.

In the other large building there were constructed in corners on the first floor two disinfecting rooms, fifteen feet by twenty, each having one or more windows communicating with the external air. These rooms appeared to be otherwise air-tight. The remainder of the first floor constituted a large wareroom for the storage of baggage. The disinfecting apparatus was supplemented by a large wooden vat, located in the boiler-house, for the purpose of subjecting clothing to the action of steam, but it was not placed in position until after the first week of detention.

This island was occupied by upward of five hundred men, women, and children, passengers from the cholera-infected steamship "Alesia," who at that date had been upon the island sixteen days. They roamed at will over the island and through the rooms of the large buildings, except the one in the second story of the building in which the disinfection had taken place, which was occupied by a number of people of the better class, who seemed to have exclusive use of it.

These two buildings were supplied with a limited number of mattresses and blankets, which were collected together in piles. We learned that this bedding had been supplied by the steamship company, but that none of it arrived until five days subsequent to the debarkation of the passengers upon the island. The immigrants were permitted access to a portion of their personal effects after disinfection. Many of the people were engaged in washing their clothing. This washing was done in vessels of various kinds and in the immediate vicinity of the mouths of the sunken cisterns. At the time of our visit the latter were uncovered, and the ground around them was saturated with the water which had been used in washing, and a number of people were scouring with this wet sand, the pans and tins in which they received their food and drinking water. They drew the water from the cisterns by pails and vessels of various kinds. According to information received, these cisterns had not been cleaned out in a number of years.

By reason of want of facilities for perfect flushing of the water-closets, due to a defect in the pumps, a supplementary latrine had been extemporized by digging a long deep trench in the sand not more than fifty feet distant from one of the large buildings, and about thirty feet from one of the cisterns. Notwithstanding these arrangements, it was impossible, on account of the inadequate police, to prevent the people from defecating in any convenient spot, and although they had been enjoined by the Health Officer against the use of the water in the sunken cisterns for drinking purposes, there were no means of enforcing this order, for access to the cisterns could indeed be had at all times. Drinking water brought from New York City was distributed upon application at a tank in

one of the buildings. Food supplied by the agents of the steamship company, and, as we were informed, brought to the island in their vessels, was prepared in the kitchen and distributed in sufficient quantities. This food, which was well cooked, consisted of bread, soup, macaroni, potatoes, pork, and beans. The dishes were generally used in common by families or small groups, and the absence of knives and forks was noteworthy.

The police force of the island consisted of one watchman assisted by an improvised corps of twelve of the more intelligent of the immigrants, each of whom received for his services one dollar per diem. In addition to the police force, there were three or four men in the employ of the Health Officer, whose duties were attention to the disinfection of baggage, to the water-closets, to the cleanliness of the buildings, to the detection of new cases of cholera and their removal to the temporary hospital, and to other similar matters. Besides these there were a cook furnished by the agents of the steamship company, and an engineer.

There was no resident medical officer upon the island. The Health Officer, who is a physician, visited the island once, and sometimes twice daily, for the purpose of inspecting the immigrants, and for the general conduct and direction of affairs. At these times the new cases which had developed in the intervals of his visits, were transferred to the hospital on Swinburne Island.

At the time of the arrival of the "Alesia," there were on board eight cases of cholera, all of which were at once transferred to the hospital on Swinburne Island. The rest of the steerage passengers, apparently free from the disease, were, with their baggage, landed on Hoffman Island, the cabin passengers and crew remaining on board

the vessel. The clothing of the cholera patients was taken back from the hospital on Swinburne Island to Hoffman Island to be disinfected, and the same course was afterward pursued with the clothing of those who, having been taken ill with the cholera, were from time to time removed to Swinburne Island. Up to the time of our visit, sixteen days after the arrival of the ship, twenty-seven new cases of cholera had developed, of which three were discovered on the day of our visit. Of the eight sick at the time of the removal of the passengers from the steamer, five died, and of the twenty-seven cases attacked upon the island, nine proved fatal, making a total mortality of fourteen. As soon as the immigrants were landed from the ship, their baggage was taken from them and stored on the lower floor of the large building in which disinfection was carried out. The process of disinfection was as follows: The articles were separated, shaken out and hung up in the disinfecting rooms, three pounds of sulphur being burned for every 1000 cubic feet of space. The disinfection of the baggage for the first time occupied five or six days, during which period the immigrants were denied access to their effects and continued to wear the clothing which they had on when they left the ship. The steam disinfecting apparatus before referred to, was not placed in position until toward the end of the first week. After that the baggage was for a second time disinfected, a double process being employed: the clothing being first subjected to the action of steam and then to the fumes of sulphur. After the first disinfection, those whose clothing was accessible, were permitted to change their garments, and were thereafter assigned to sleep in a separate room, but were not prevented from mingling with the other immigrants

during the day. No effort was made otherwise to separate the passengers into isolated groups, nor indeed was there, in our opinion, any adequate provisions to prevent occasional communications by means of small boats, especially at night, between Hoffman Island and the shore. We were informed that boats had not infrequently been seen hovering around the island, and had occasionally been warned off.

Swinburne Island, on which the hospital is located, is somewhat larger than Hoffman Island. The hospital, consisting of several one-story wooden pavilions, and the grounds are in excellent condition. The water supply is contained in sunken cisterns for the storage of rain water, placed in the open spaces between the pavilions. The mouths of these cisterns are on a level with the ground, and are covered with stone slabs. There is an adequate heating and cooking apparatus, and there are also a small disinfecting room and an apothecary shop.

The *personnel* of this island consists of a resident superintendent, who is not a physician, and, at the time of our visit, two male nurses, one of whom at different times had attended medical lectures. There was also an intelligent Italian gentleman, without medical or nurse training, who had volunteered his services in the care of the sick. The wards of the hospital were supplied with a sufficient number of bedsteads and necessary bedding in good condition, and contained nine patients, including the three discovered on the day of our visit, and who had been brought over with us from Hoffman Island.

The dead were buried in shallow graves on a sandspit at the extreme end of Staten Island, known as Seguin's Point.

QUARANTINE STATION AT PHILADELPHIA.

We visited this station, known as the Lazaretto, October 13th, and made the following observations: It is situated on the right bank of the Delaware River, eleven miles from the city, on Little Tinicum Island, a large tract devoted to farming, which is separated from the mainland by Darby Creek. It comprises twelve acres belonging to the city and six acres the property of the United States Government. There is a large main building of brick, substantially constructed at the beginning of this century. The central portion of this building is occupied by the steward, and contains offices of administration. There are two wings, two stories and an attic in height, one of which is used by the crew of the boarding steam-vessel, and the other is arranged for hospital purposes, with a capacity of forty beds; but it is at present unfurnished.

Some distance in the rear of this building is a two-story brick hospital, with a capacity of thirty beds, and containing a dispensary. The dead-house is at the end of the building, but does not communicate with it. Near by is a wooden building ten feet by twelve feet, with a double wall and without windows, used for disinfecting by sulphur. There are at the station thirty-eight beds, mattresses, and corresponding furnishing. Two small brick buildings near the river front accommodate the Lazaretto Physician and Quarantine Master, respectively.

The water-supply is obtained from old-fashioned wells with hand pumps. There are no large reservoirs for water or large steam-boilers, or bath-tubs. There are privies, but no water-closets. The station is

connected with the city by telegraph. The Lazaretto Physician, the Quarantine Master, the male nurse, the telegraph operator, the crew of the boarding vessel, and the other attendants reside at the station during the quarantine season, which, as a rule, lasts from the first of June until the first of October. The steward resides at the station during the whole year. When the quarantine station is closed, the port-physician examines the vessels in the stream opposite the city.

On the government property is a large stone warehouse, about 120 feet by 40 feet, two stories and an attic in height, and also two brick buildings, in one of which resides the government inspector. There are no means of heating this warehouse, and its numerous windows are without sashes.

QUARANTINE STATION AT BALTIMORE.

This station, which is a new one, having been occupied only two years, is situated seven miles below Baltimore on the right bank of the Patapsco River, upon a point of the mainland jutting out into the stream and known as Little Hawkin's Point. The territory embraced in the quarantine station consists of fifteen acres, upon which are erected three frame dwellings, namely, a hospital of two stories with accommodations for about sixty patients, a dwelling for the medical officers, and another for the use of the crew of the boarding tug. The water is supplied by a spring about two hundred yards distant, being lifted by a windmill to a tank sufficiently high to permit of its distribution to the second story of the buildings.

The station has in store seventy-five tents to be used

in emergency. No fence or wall separates the grounds from the adjacent land. At the time of our visit the hospital was unoccupied and locked up, so that we were unable to inspect the interior, but were informed that it was supplied with iron bedsteads and the necessary bedding. There is no special disinfecting apparatus at the station, nor any adequate means of disinfection; but there was pointed out to us a wing of the hospital designed for a kitchen, consisting of a small room with two windows and a door communicating with the building, in which, it was said, fumigation with sulphur could be practised. The water in front of the station is shoal, large vessels being obliged to anchor within two hundred yards of the main channel. The Quarantine Officer and his assistant, both of whom are physicians, besides the crew of the tug, a male nurse, and a gardener, reside at the station during the quarantine season, which usually ends October 31st.

We also visited the place four miles nearer Baltimore, which was formerly used as the quarantine station. It is now unoccupied and fallen into decay. It consists of a tract of land about four hundred acres in extent and several dilapidated buildings, including eight one-story wooden barracks. This establishment is occasionally used as a pest-house for smallpox cases from the city of Baltimore. It is now unfurnished and untenable.

CONCLUSIONS.

It is evident that the quarantine establishments at Philadelphia and at Baltimore fail in the most essential requisites of the necessary number of properly equipped

buildings for the isolation and observation of a large number of immigrants.

In regard to the station at New York, the buildings are sufficiently large and numerous, and have adequate arrangements for heating and cooking, but they are not divided into a sufficient number of small compartments to permit the strict isolation of the immigrants into small groups. The water-closets were not sufficiently numerous, nor were they all in good working order; neither were there enough bath-tubs. The pumps, by which the supply of sea water used for flushing these closets was obtained, were out of order, and a period of two weeks elapsed before the necessary repairs could be made. It is also worthy of note that the soil-pipes only reached the sea by the already mentioned series of angular turns.

The necessary use of the supplementary latrine we have described. Objectionable in construction and situation, as it was, it constituted a menace to the safety of the immigrants detained upon the island, among whom new cases were from day to day occurring. The dangers of infection were still further increased by the fact that the immigrants could not, under the existing state of affairs, be prevented from defecating at any convenient spot.

There was no provision for the general washing of clothing by the authorities. As a result of this defect, there arose the exceedingly dangerous practice of the washing of clothes at the cisterns by the immigrants themselves. The existence of underground cisterns at a station of this kind is, in itself, highly objectionable. All water reservoirs should be inaccessible to the immigrants, and should be placed above ground in such a manner as to avoid all danger of accidental contamination.

The disinfecting chambers were sufficiently capacious, but the existence of windows in them was a fault of construction which would seem decidedly to impair their efficiency.

The lack of bedsteads, chairs, tables, and proper eating utensils, added to the hardships of the immigrants and to the dangers of infection.

The location of the room used as a temporary hospital, namely, directly opposite one of the water-closets, and the fact that patients, known to have cholera and placed in this hospital, were allowed to use the water-closets in common with others, constituted a serious danger, and suggested the advisability of the use, for this purpose, of a separate building provided with its own water-closets and system of drainage.

Your Committee feels called upon to comment upon the absence of a resident medical officer at this station, and of an adequate force of watchmen, patrolmen, and attendants. As a consequence of these defects of organization, the well-recognized requirements of a quarantine of observation as pointed out in paragraphs *o*, *p*, and *q* above, could not possibly be fulfilled. The possibility of occasional clandestine communication between the detained immigrants and their friends ashore, by means of small boats, constituted a danger to the country, difficult to estimate, and against which, so far as we could learn, there were no certain precautions.

There was, in fact, no official supervision of the personal hygiene of the detained, no compulsory bathing or washing. The absence of towels in the lavatory and of paper in the water-closets, was notable. Soiled hands and filthy clothing indicated habits which favored the transmission of the cholera infection from person to

person, particularly as the custom of several individuals eating from a common dish, without knives or forks, was frequently observed.

One of the results of the absence of bedsteads was the promiscuous heaping together of the mattresses and blankets during the day, in order to make room for washing the floors with disinfectant solutions; the bedding was thus doubtless used on successive nights by different persons, constituting a very probable means of transmission of the disease if it should become soiled by dejecta or vomit. Furthermore, as there was an insufficient number of mattresses, two or more persons must have, in many instances, occupied one bed.

The hospital building on Swinburne Island appeared to be excellently adapted to its purposes. The use of underground cisterns for the storage of water is, however, here also objectionable. As there were no less than nine cases of cholera in the wards, at the time of our visit, some of whom were desperately ill, your Committee noted with surprise the absence of a resident physician, a fact that demands no further comment. And it was a reversal of modern ideas to find male nurses in charge of female patients.

Your Committee was at a loss to understand why the clothing of patients was sent back to Hoffman Island to be disinfected, as there is a disinfecting chamber in connection with the hospital. We were informed that the convalescents were, as soon as they were strong enough to be about, returned to Hoffman Island, without having been previously bathed and disinfected.

The recent arrival of the "Britannia," another steamship of the same line, with a large number of Italian immigrants from the infected port of Naples, among

whom, if press reports are true, cholera evidently made its appearance during the voyage, its existence being either not recognized by the ship's surgeon, or else concealed by the deliberate falsification of the ship's sanitary record, has already, in the opinion of your Committee, seriously increased the present danger of the ultimate introduction of cholera into the country through the port of New York. It would seem that if the importation of immigrants directly from a European port notoriously infected, is not to be temporarily prohibited as a necessity of public safety, or if the treatment of these immigrants, after their arrival at the New York quarantine station, is not to be immediately and radically improved, our protection against an epidemic at the present time must rest mainly upon the fortunate circumstance of the near approach of a season in which the disease does not usually spread. The continuance of cholera among the passengers of the "Alesia" so long after their removal to the station of observation, in itself demonstrates the inefficiency of the measures which have been adopted and enforced for its extinguishment there. Although we have not yet heard of the development of the disease anywhere on the main-land, nevertheless, in view of the almost uncontrollable tendency of cholera to spread at times, and of the original insufficiency and the present faulty constitution of the police force on Hoffman Island, we feel impelled to believe that the immunity up to the present time has been owing to singular good fortune, rather than to good management.

Moreover, in our opinion, it is necessary that the personal effects of Italian immigrants directly from the infected ports shall be, in all cases, thoroughly disinfected before they are permitted to land, whether the word cholera

makes its appearance in the ship's log and the sanitary record of the voyage or not. It is a well-known fact, established by numerous instances, that even when immigrants from an infected locality have themselves remained free from disease during the voyage, their baggage, packed before starting, has been the conveyer of the infection to their point of destination. The passengers of the steamship "Independente," most of whom were shipped directly from the infected port of Palermo, although it is stated that during the voyage no case of cholera developed, come under this category. The recent action of the Surgeon-General of the Marine Hospital Service, and the alarm of the health authorities of the cities of Chicago and St. Louis, seem, therefore, not without some just foundation.

It should be stated, however, that we have learned through the medium of the public press that an attempt has been made to remedy a few of the defects above pointed out. What has been done would appear, however, to be in the direction of improvement in minor matters, rather than in such radical changes as would insure the country against the dangers to which it is exposed.

In the conduct of its personal investigations, and in the preparation of its report, your Committee has dealt solely with patent facts and plain truths which would meet the eyes and occur to the minds of any unprejudiced and competent men charged with a similar duty. To lay the simple statement of these facts before physicians who are in possession of modern knowledge concerning the nature, cause, mode of production, and means of prevention of such a virulently infectious disease as Asiatic cholera, is to prove beyond rational dispute that the

present quarantine, as a safeguard at the ports under consideration, is dangerously and essentially imperfect.

It is natural, after having made our comments on the defects of the quarantine stations we have described, that we should endeavor to point out their causes and probable remedy. There is one cause so prominent, that we may dwell on that alone. It is the great expense. Were it not for the question of money, there would have been physicians constantly in attendance at the New York station, and, consequently, better management and discipline would have been maintained, while at Philadelphia and Baltimore there would have been adequate establishments provided for the isolation and observation of large bodies of immigrants.

Municipalities and States are wont to scrutinize every dollar of their money appropriations, bringing their expenses down to the closest living limit. Quarantine in this country being, as a rule, enforced mainly against yellow fever and smallpox, a mistaken economy has caused no provision to be made for the more perfect establishments absolutely required for protection against cholera.

Philadelphia, Baltimore, and other ports of a more limited commerce, are unable to spend as much on their stations as is New York, with its large revenues from that source, yet an inefficient quarantine at any station exposes the whole country to the dangers of the importation of disease. But it is manifestly unfair that a single municipality or State should defray the expense of protecting the whole public.

How, then, can we have equally complete stations all along the coast? We believe that this can be effected by putting quarantine into the hands of the National

Government. We know that there are legislative difficulties in the way; that quarantine partaking of the nature of police regulation, its exercise, it may be claimed, belongs to the local authorities. Yet, even if it be conceded to be a police regulation, its scope is not local, but extends over the whole country, and it would seem, in justice, that it should be exercised and paid for by the whole country. Objection is sometimes made to quarantine on the ground that commerce is unduly interfered with, or even destroyed. A modern quarantine, however, does not necessarily involve the detention of cargo, nor prolonged detention of the passengers. It is now known that in the case of cholera the disease germs infest the persons, clothing, and surroundings of the passengers and crew, while the cargo, except in some rare instances, is free from infection. Non-infected vessels require no detention whatever, the health officer examining them in transit.

Not to speak of the danger which threatens the whole country, the exposure, suffering, and loss of life that have occurred among the passengers of the "Alesia" detained at the quarantine of observation on Hoffman Island, have been due to the imperfect manner in which the measures of quarantine have been there carried out. Had the details of isolation and disinfection set forth in the earlier pages of this report been immediately and effectually put in force, the passengers who were not already infected at the time of leaving the ship, and this includes the whole number with very few exceptions, might have been released from quarantine in eight days, without the slightest risk to the country.

The thanks of the Committee are due to the quarantine authorities of New York, Philadelphia, and Baltimore

for courtesies extended to it in conducting the investigations upon which this report is based.

Your Committee offers the following resolution :*

Resolved, that in order to secure concerted action among the medical societies of the United States looking to the early adoption of a uniform and efficient quarantine of all exposed ports, the Committee be continued and be authorized to issue an address to the medical societies of the country, and seek their coöperation.

All of which is respectfully submitted.

J. C. WILSON, *Chairman*.

E. O. SHAKESPEARE,

R. A. CLEEMANN.

PHILADELPHIA, October 28, 1887.

* This resolution was unanimously adopted by the College.



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